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| 10/007,002 | 11/30/2001 | Michael Neal | DEM1P009 | 9261 |

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| EXAMINER |
|---|
| RUHL, DENNIS WILLIAM |

| ART UNIT | PAPER NUMBER |
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| 3629 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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| 3 MONTHS | 04/18/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

| | **Application No.** | **Applicant(s)** |
|---|---|---|
| **Office Action Summary** | 10/007,002 | NEAL ET AL. |
| | **Examiner** | **Art Unit** | |
| | Dennis Ruhl | 3629 | |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on _16 February 2007_.

2a) ☐ This action is **FINAL**.    2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) _1-6,9-11,14-19 and 25-28_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-6,9-11,14-19,25-28_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

1.       A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/16/07

has been entered.

   Currently claims 1-6,9-11,14-19, and 25-28 are pending. The examiner will

address applicant's remarks at the end of this office action.

1.       35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

   Claims 5,10, are rejected under 35 U.S.C. 101 because they appear to be a

mixing of two distinct statutory classes of invention. The recitation of "wherein the new

data source *provides new data subsequent to* providing initial prices by optimizing

prices" is a positive recitation to a method step. Claims 5 and 10 depend from

apparatus claims. Apparatus claims that contain recitations that positively recite the use

of recited structure in a method step are not considered statutory because the claim is

bridging two distinct statutory classes on invention. The most recent amendment has

not changed the claims to any extent that would overcome this rejection.

2.      The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.      Claims 1-6,9-11,14-19,25-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For claims 1,14, the limitation that the rule prioritizer is configured to "*iteratively prioritize*" a plurality of relaxable rules is considered to be new matter. The specification as originally filed disclosed that the user, not the system itself, decides the priority of the rules and there is no iterative process involved in selecting the priorities for the rules. The system is either set to a default priority mode for the rules (which was decided beforehand by a human who set up and programmed the system) or the user can select priorities for the rules that are other than the default settings, see the specification as was originally filed on page 21, lines 13-16. The rule prioritizer was not disclosed as actually prioritizing the rules, which appears to be what is now claimed. The only iterative process that the examiner sees happening in the instant invention is the actual process where rules are checked for feasibility, etc.. That process seems to be iterative, but not the process of prioritizing the rules, which is done by the user of the system.

For claims 5,10, not disclosed in the specification as originally filed is that there is a "new data source" that includes an econometric engine and a financial model engine. It was disclosed that the price optimization system 100 (the system that is being claimed) has an econometric engine and a financial model engine, nothing was disclosed about a new data source having what is claimed. This is considered to be new matter. The examiner notes that applicant did not provide a showing of where support can be found for the newly added claim language and as far as the examiner can tell, this appears to be new matter.

4.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.      Claims 1-6,9-11,14-19,25-28, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 1,14, it is not too clear as to what the language "*configured to iteratively prioritize a plurality of relaxable rules*" is supposed to be claiming (same is true for the similar language of claim 14). What does it mean to "iteratively prioritize" the rules? This is not clear. From the specification, it is disclosed that the "user" determines the rules and what priority they take in the algorithm, so is this claim language now claiming that the system itself is the one that is selecting what rules go in what particular order in the rules hierarchy? That seems to be what is claimed. In the specification it is disclosed that there is a default prioritization for the rule priorities or the

user can change the prioritization from the default. The system itself is not selecting the priority for the ordering for the rules, this is done by the user of the system who either selects default mode or a custom mode where the user designates the priorities of the rules. No rules are being prioritized by the system as appears to be claimed. This interpretation does not appear to have support in the specification as originally filed so for purposes of examination, this language has been interpreted to mean that the rule prioritizer is capable of analyzing and relaxing rules (if needed) that have differing priorities. It is not clear as to what this language is defining in the claim because the only interpretation seems to be one that results in this limitation being new matter. Is this language supposed to be interpreted in another manner? Claim 1 is considered indefinite.

For claims 2,15, the newly added language at the end of the claim that reads "*and wherein the selected no more than N products has the largest impact on the optimization of prices of any subset of no more than N products of the plurality of products*" is indefinite. The claim recites that the product designator "enables" a number N to designated, and the product designator selects no more than N products. What are the products that will have the largest impact on the optimization of prices of any subset of no more than N products of the plurality of products? One wishing to avoid infringement would have no idea what products are defined by this language and which products are not defined by this language. This renders the claim indefinite. Also, if one were doing an optimization for prices, how would you know what products will have

the largest impact on the optimization of prices? This is like knowing the answer before the program is allowed to run. This does not seem to make any sense.

For claims 5,10, it is not clear if these claims are apparatus claims or method claims. The recitation of "wherein the new data source provides new data subsequent to providing initial prices by optimizing prices" is a positive recitation to a method step in what is otherwise considered to be an apparatus type claim. One wishing to avoid infringement would not know if just having the system as claimed would be infringement, or if having the claimed system and using it in the claimed manner would be infringement (i.e. having a new data source provide new data subsequent to providing initial prices). It is also not clear if applicant is now trying to claim their invention as including the data source that provides the new data, in part due to the fact that the claim reads like a method step. Is the data source being claimed as part of the invention?

## Claim Rejections - 35 USC § 102

6.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.      Claims 1-6,9-11,14-19,25-28, are rejected under 35 U.S.C. 102(b) as being anticipated by Reuhl et al. (5873069).

For claims 1,14, Reuhl discloses a method and system (with software) where product sales and price data is entered into a computer system and the system then "optimizes" (optimization engine) the prices of numerous products based on the inputted sales data. The system is configured to find the best price for products, which is done to achieve a business goal. The system is optimizing in the sense that they are making the system determine the best price, which to Reuhl, is the lowest price. The software has a rule prioritizer with criteria (rules) for figuring out the final pricing of the products. The rules include looking for sales prices, advertised prices, etc., as well as applying a cent code to the resulting lowest price, and then the rules check to ensure that the new active price with the cent code is not greater than the competitor price. If the new price with the cent code results in the price being higher than the competitor price, then a new active price is calculated by incrementally relaxing the cent code rule (done by a rule relaxation module portion of the software). This is an iterative process. If the calculated price for a given item(s) is $4.53, and the cent code rule requires the item to end in a 9, the price is changed to 4.59 in accordance with the cent code rules. Then the system compares the price of $4.59 to the competitor's price to ensure that a higher priority rule (lowest price) is feasible. If $4.59 is not the lowest price, 10 cents is subtracted to arrive at a new price, which is $4.49 (relaxing the cent code rule that stated the price should end in 9, namely from $4.53 to $4.59). The incrementally relaxing (rule relaxation module) of the rule results in the price changing from $4.59 to $4.49. This is done in increments of 10 cents at a time. The rules are prioritized as claimed because the rules for figuring out prices look to various conditions and moves on to other conditions if prior

conditions are not feasible (result in the price being higher that the competitor). The storage medium of claim 1 is disclosed in column 3, lines 29-32. The steps of storing initial prices are satisfied because at some point you must input some kind of price into the system. This is inherent. Also, when new data is sent to the system, the price setting process is repeated, which also defines an "iterative" process. Reuhl discloses a product designator configured to designate a subset of products. This is because the computer system (software) only optimizes prices for products that have had new sales data entered into the system, which is in the scope of what is claimed. Applicant also disclosed this as an example on page 28, "*One possible assumption for an algorithm may be that the maximum number is at least as large as the number of products with information changes*". So in Reuhl, if sales data for televisions is updated in the system, the prices for batteries will not be changed. This satisfies what is claimed. The examiner encourages applicant to read the entire patent to Reuhl, but also refers applicant to the following sections of particular relevance to the claimed invention. See column 6, lines 29-44; col. 7, lines 23-39; col. 8, lines 12-27; col. 10, lines 28-32; col. 11, and lines 26 to column 12, line 52.

For claims 2,15, the "N" products are the number of products that the new sales data relates to. N can be the number of televisions that prices are being optimized for. As best understood by the examiner, this satisfies what is claimed.

For claim 3,16,25-28, Reuhl results in prices for items that are optimized for profit, total revenue, and sales volume. The intent of the price determination system and method of setting prices is to make money by selling your products. By ensuring

that your prices are lower than competitor's prices, you are optimizing the prices for

profit, total revenue, and sales volume at the same time. If you have the lowest prices in

a particular area for a given item, you will sell more of that item than you would

otherwise sell if the price were higher, and this results in a greater sales volume, a

greater total revenue (if you sell more of the items, you bring in more money), and a

greater profit due to the greater sales volume.

For claims 4,9,17, with respect to "initial prices", once you run an optimization

routine, the very last price prior to the optimization is the "initial price". Reuhl discloses

what is claimed.

For claims 5,6,10,11,18,19, the claimed "new data" is the newly received pricing

data that is used to arrive at new prices and the new price bound data is the

identification of the product that the newly received pricing data is for. When a

competitor changes the price of an item, data is received that identifies the product and

the new price. The optimization methodology is then followed to figure out a new price.

This satisfies what is claimed.


8.      Applicant's arguments filed 2/16/07 have been fully considered but they are not

persuasive.

With respect to the 35 USC 101 rejection for claims 5 and 10 (with respect to the

positive recitation of method steps in apparatus claims), applicant has not amended the

claim language in any apparent manner that overcomes the rejection and has not

provided any kind of traversal. Applicant made some comments on how the claim was

amended and has repeated the claim language, but no explanation was given as to how this amendment is believed to overcome the 101 rejection. The central issue remains, namely that applicant is claiming a method step of using recited structure of an apparatus claim. The language of the claim "wherein *the new data source provides new data subsequent to* providing initial prices by optimizing prices" is still directed to a method step that is reciting when particular actions are being done. The rejection will be maintained.

With respect to the 112,2$^{nd}$ rejection for claims 5 and 10, applicant has not traversed the rejection in their comments. There is no explanation as to how and why the rejection should be overcome. The rejection will be maintained.

With respect to the 112,1$^{st}$ rejection for claims 5 and 10, the argument is not persuasive. Applicant has argued that the specification discloses that new data may be provided to the system and that this data can come from the econometric engine or the financial model engine *or through another source*. This is not addressing the central reason behind the rejection, which is that it was never disclosed that there was another data source that comprises an econometric engine or a financial model engine. It was disclosed in the specification that the price optimization system 100 (the system that is being claimed) has an econometric engine and a financial model engine, but nothing was disclosed about a new data source having what is claimed. Where was it disclosed that the "another source" itself has an econometric engine or a financial model engine? The examiner still believes that new matter is being claimed and the rejection will be maintained.

Applicant is arguing that the Reuhl reference is not directed to determining optimized prices but is directed to setting of prices to be the lowest price. The examiner still finds that the actual steps recited in the body of the claim that define applicant's optimization process are found in the prior art reference, so the rejection is deemed proper. Applicant is claiming a process of setting prices that is disclosed by Reuhl, as far as the claim language goes. By having the lowest prices for various products, the owner of the system of Reuhl is configuring the system to arrive at a price that is effective as possible, which to them is the lowest price. It is very well known in economics that lower prices attract consumers and consumers don't want to have to pay more for a product than they have to. By having the lowest prices, this allows for increased sales volume and increased profits due to the increased sales volume for that given item. Also the increased sales volume and profit can be due to the fact that you get customers into the store by luring them in with the low priced goods. Reuhl does teach a method of optimization. The argument is not persuasive.

Applicant has comments directed to the added language to claims 1 and 14 of "iterative" with respect to the system and the applied rules. The alleged support from the specification (page 21, lines 14-16) for this limitation does not appear to support what is claimed. The cited portion of the specification does not even contain the term "iterative". At any rate, this limitation is considered to be present in the prior art as is discussed in the rejection of record. The system of Reuhl goes through various steps in arriving at a final price, which constitutes an iterative process. Also, when new data is sent to the system, the process is repeated, which also defines an iterative process.

Applicant has argued that Reuhl "is a static and exhaustive rule set that is not alterable.". What does this have to do with what is claimed? In Reuhl there is a change in rule order, which depends on the resulting price that is determined by their methodology. Applicant has also argued that Reuhl is not active and dynamic prioritization of rules. The examiner disagrees. Certainly Reuhl is active in the sense that a program is running and checking various rules to see if they are allowed to come about or not. That is active and dynamic as the price of a product is being changed actively and dynamically. This argument is not persuasive.

With respect to claims 2 and 15, the argument is non-persuasive. One of the examples in the specification is having the subset of products be those that have new data. Applicant disclosed this as an example on page 28, "*One possible assumption for an algorithm may be that the maximum number is at least as large as the number of products with information changes*". The subset is chosen to be those products with new pricing data. Because the price of those products is changing, and because Reuhl is concerned with having low prices, those products will be of interest to and have a large impact of the business. The broad limitation of "selecting no more than N products" is satisfied by the prior art. This broad language reads on what is disclosed by Reuhl.

9.     Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Ruhl whose telephone number is 571-272-6808. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DENNIS RUHL
PRIMARY EXAMINER